cava. Thus, on the right side, the blood from the lower extremity, collected by the superficial veins, passed along the tegumentary veins and external mammary into the axillary vein, and from that into the superior cava; whilst the blood of the deep portions of the same limb was emptied into the *vena comes* of the saphena nerve; and from it into the *vena cava* inferior, above the contracted portion, and lumbo-vertebral venous plexus. On the left side, again, the superficial blood returned to the centre of circulation in the same manner as that on the right side; whilst the venous blood from the deep portions of the limb was poured into the epigastric vein, and from it into the sinus of the *vena portæ* by the umbilical vein.

The opening of one of the epigastric veins into the umbilical vein, and the enormous dilation of the vein which accompanies the crural nerve, and communicated with the *vena cava* inferior, were the two most striking anomalies in this case.—*Gazette Méd. de Paris*, November 7, 1841.

MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

10. *Results of Re-vaccination in the Deaf and Dumb Institution of Paris.*—The number re-vaccinated was 128—124 pupils, whose ages varied from ten to eighteen years, and four adults, servants of the institution. Of the entire number, 60 were males and 68 were females. The operation was performed from arm to arm; the vaccine lymph was abundant; and the number of punctures made in each arm varied from two to six.

In 25 of the individuals, there neither were any traces of previous vaccination on their arms, although they had no doubt been vaccinated in infancy, nor were there any marks of smallpox on their face or body. (The mere absence, however, of cicatrices cannot be taken as a proof that the parties had never been vaccinated, nor had passed through variola.) Of these 25 cases, the vaccination produced no vesicles in 18; imperfect or false vesicles in four; and genuine cow-pox vesicles in three only.

Of seven individuals, who had distinct marks of smallpox on their faces, limbs and bodies, the operation succeeded perfectly in two, and failed altogether in five of them.

In the remaining 94 cases, there was distinct cicatrices of a former vaccination, the number of these varying from one to four or six; in some, one or more cicatrices were observed on each arm, in others on one arm only.

Now of these 94 persons, ten exhibited distinct cow-pox vesicles (after the re-vaccination,) 16 imperfect or bastard vesicles, and, in the remaining 70, the operation failed in producing any effects.

If we take, therefore, the entire number of persons "all well re-vaccinated by me," says M. **Meniere**, the reporter, "we find that in 15 cases only out of the 128, regular cow-pox vesicles were formed over the punctures on the arms; in 20 the vesicles were imperfect or bastard; and in 93 none at all were developed. From these data it appears that the operation took effect in about *one-eighth* of the whole; in about the same proportion, *one-eighth*, in those who had never had smallpox, and who exhibited no traces of vaccine cicatrices on their arms, although they had been vaccinated at some former period of life; in *one-third* of those who had had smallpox in their youth; and in about *one-tenth* of those in whom the cicatrices of a former vaccination were still distinct."

In estimating these results, it may be proper to attend to certain circumstances connected with the cases.

Of the fifteen persons in whom the re-vaccination took complete effect, ten were under thirteen years of age, and the other five were a few years older. In the two young girls, in whom it succeeded after previous smallpox, (which had left numerous and most distinct traces on the face and elsewhere) five years had elapsed in one case, and seven in the other, since the date of the attack

Among the pupils who had been vaccinated in their infancy, and in whom the re-vaccination took complete effect, two were twelve years, and the third was fourteen years old.

From these data, we may infer that the preservative or counteracting power of smallpox does not exceed that of cow-pox; since, under very similar circumstances, those who had passed through the two diseases were submitted to the same contagious influence, and experienced nearly the same results.

But we are unwilling to draw any general conclusions from the preceding report; as we are well aware that experiments must be made on a much more extensive scale before we can safely do so.

In conclusion, we may state, that several infants were vaccinated for the first time from the vesicles on the arms of those in whom the second operation took effect, and that the virus thus obtained seemed to be perfectly genuine and active. —*Med. Chirurg. Rev.* from *Journal des Connaiss. Med. Chirurg.* Sept. 1840.

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11. *General result of the Vaccinations and Re-vaccinations in France.*—There is in a recent number of the *Annales d'Hygiène et de Méd. Légale* a table, prepared by M. **Villeneuve**, the reporter of a commission appointed by the Royal Academy of Medicine, exhibiting the general results of the vaccinations and re-vaccinations performed, and of the number and issue of the cases of smallpox in those who had been vaccinated, compiled from reports sent from forty-one departments. The results of those reports only are given in which the vaccinators have recorded their unsuccessful as well as successful cases; and wherever the re-vaccinations were described as doubtful, they have been omitted.

We give only the totals.

Vaccinations.			Re-vaccinations after ascertained Vaccination.			Smallpox after ascertained Vaccination.	
Number.	Successful.	Unsuccessful.	Number.	Successful.	Unsuccessful.	Number.	Deaths.
30,410	29,853	560	2199	223	1976	365	8

It results from this table:—

1. That the proportion of cases in which vaccination failed, compared with that in which it took effect—estimated by some writers as one to eight, or one to ten—is not more than about one to fifty-four.

2. That of 2199 cases, in which re-vaccination was performed on persons of different ages and sexes who had been successfully vaccinated at some previous period of their lives, the operation took effect in 223 cases only—which would give the proportion of about one to thirteen or fourteen.

3. That of 365 cases of confirmed smallpox, occurring in persons, who had been at some previous period successfully vaccinated, there were only eight that proved fatal—giving a proportion of about one in forty-five or forty-six.

We know that sporadic smallpox usually carries off about an eighth or a tenth of those who are affected with it; and that, when the disease becomes epidemic, the mortality is often as high as one in four, and sometimes even higher.

M. Villeneuve, in submitting the above table as containing the results of the labours of the commission, admits that the data hitherto supplied are far from being sufficient to solve the question submitted by the government to the Royal Academy—whether it is necessary to have recourse to re-vaccination as a universal measure throughout France.

12. *Anatomico-Pathological Researches on Cirrhosis of the Liver.* By **Alfred Becquerel**, of Paris. The name cirrhosis was given by Laennec to a peculiar affection of the liver in which that organ appears as if filled with numerous yellow granules, which are sometimes present in such numbers that the surface of a section of the liver presents an uniform yellow colour. If this surface is carefully examined, M. Becquerel says, an innumerable quantity of minute granulations may be discovered, which may be compared to the lobules of hardened and reddish-coloured fat which are commonly found in the subcutaneous cellular tissue of the thigh and leg of anasarcous subjects. These little masses are sometimes intimately united to the texture of the liver, but they are frequently separated from it by a thin layer of cellular tissue which forms a slight envelope round the globules from which they are easily detached.

The exact nature, the causes, and the symptoms of this affection are very imperfectly understood; and it is for the purpose of elucidating these points that M. Becquerel has published the present memoir. Laennec considered that in this disease a new morbid product was deposited in the liver, which he termed "cirrhose," and which he believed might be also developed in other organs of the body; appearing first in a state of crudity and afterwards softening. Andral states that the granules, in his opinion, merely arise from hypertrophy of the white or secreting part of the liver, which in the more advanced stages is accompanied with corresponding atrophy of the red or vascular tissue, giving rise to that shrivelled state of the liver generally which was described by Laennec as frequently occurring in this disease. M. Cruveilhier considers that cirrhosis consists in atrophy of a great number of the lobules of the liver, and a corresponding degree of hypertrophy of those which remain which causes the irregular granulated surface. Dr. Carswell, who gives an admirable description and delineation of this disease in the article Atrophy, in his work on Pathological Anatomy, regards it as consisting in atrophy of the lobular structure of the liver, produced by the pressure of a contractile fibrous tissue formed in the capsule of Glisson; an opinion which, as we shall find, very nearly coincides with that adopted by the author of the present paper. M. Bouillaud regards cirrhosis as a disunion of the two natural elements of the liver, the yellow granulations being nothing more than the secreting lobules undergoing disorganization in consequence of obliteration of the vascular tissue and consequent obstruction of the hepatic circulation.

M. Becquerel, previously to stating his own opinions on the nature of the morbid alteration of the liver in cirrhosis, briefly reviews the different opinions concerning the intimate anatomical structure of this organ in its natural state; and he adheres to the notion that there are two distinct substances; one yellow, which is the true secreting tissue, and the other red, which consists of the ramifications of veins and arteries. He inclines to the opinion of Cruveilhier, that each lobule possesses a spongy tissue not injectible; and thus widely differs from Mr. Kiernan, who describes the liver as being throughout essentially vascular; the lobules consisting of minute radicles of the biliary ducts surrounded by a plexus of the terminating branches of the portal veins. The latter eminent pathologist explains the differences in appearance between the red and yellow parts of the liver by the different degrees of injection of the different portions of its tissue.

Admitting, then, the presence in the liver of secreting lobules, into the interior of which no vessels enter, not even the minute ramifications of the biliary ducts, which together with the branches of the vena porta and hepatic artery form a network round the lobules without penetrating them; the lobules themselves merely consisting of a mass of albuminous corpuscles, as described by MM. Dujardin and Verger; M. Becquerel next endeavours to ascertain which of the tissues—the secreting or the vascular—is the one altered in cirrhosis, and he arrives at the conclusion that it is the latter only. He says that this tissue becomes infiltrated with a yellowish plastic or fibro-albuminous matter, which possesses the properties which characterize fibrine and albumen; for it is coagulated by heat, and by a continued application of that agent is converted into a horny substance. He considers that this effused matter is analogous in its composition to the false membranes which are developed in mucous, and more frequently serous tissues; and he says that it undergoes the same changes.

M. Becquerel has determined that in this disease of the liver no pus globules can ever be detected in the altered structure; a very small quantity of fatty matter is likewise present, which is always abundant where pus is met with. He deduces from these facts that cirrhosis does not arise from acute inflammation; the absence of fat will also distinguish this disease from the fatty disease of the liver,* in which this organ is likewise of a yellow colour.

This fibro-albuminous matter is supposed to be deposited by interstitial infiltration in the central part of the secreting lobules, and the yellow substance of the liver becomes thus hypertrophied and causes compression, and eventually atrophy of a great part of the red or inter-lobular substance. Many of the vessels and ducts are thus obliterated, and the tissue of the liver becomes difficult of injection. In the most advanced stages of this disease the effused matter loses great part of the water which entered into its composition, becomes firmer, and contracts in size. It thus undergoes the same change as false membranes, which are at first soft and thick like white of egg, but which afterwards becomes organized and firm, and lessen in volume. From the contraction of this matter the yellow substance of the liver which was at first hypertrophied becomes atrophied, the altered lobules are diminished in volume, and many of them often coalesce, forming the patches which were described by Laennec as occurring in certain forms of this disease, and which give an irregular appearance to the surface or to a section of the liver. When this retraction has taken place, a great portion of the red or interlobular tissue of the liver no longer exists, and we only see an irregular agglomeration of yellow tubercles of different sizes, and the whole organ becomes hardened and shrivelled.

The immediate causes of this disease are completely unknown. M. Becquerel conjectures that it may arise from active and long-continued congestion of the liver, consequent upon chronic disease of the lungs or heart, (with the affections of which organs cirrhosis is often complicated,) or arising from other causes.

Cirrhosis never affects the liver partially, it always attacks all parts of the substance simultaneously. The gall-bladder is almost always quite natural. M. Becquerel has not made any comparative analysis of the state of the bile in this disease, but he found it vary considerably in consistence and colour.

This affection of the liver is mostly complicated with organic disease of other parts, as Bright's disease of the kidney, and various lesions of the heart and lungs; it is rarely met with by itself: M. Becquerel only found seven out of forty-two cases which he could consider as uncomplicated. He classes these complicating diseases under two heads: *First*, Chronic diseases, developed before or at the same time as the cirrhosis. *Second*, Diseases more or less acute, and probably consequences of the cirrhosis. 1. To the first class belong the following:—Lesions of the *Heart*. These are more commonly met with in connection with cirrhosis than any other; for in forty-two subjects examined the heart was affected with chronic disease in twenty-one cases, or in half; and the disease in all these instances had advanced to such a degree that it must have preceded, if it did not give rise to, the disease of the liver. The disease of the heart in these cases is often complicated with other affections, as emphysema of the lungs and chronic bronchitis, tubercular disease, or Bright's kidney.

It is exceedingly difficult to determine whether the affection of the heart gives rise to that of the liver, and if so in what manner. M. Becquerel has no doubt that the former precedes the latter in almost all cases, and supposes that it may give rise to it by keeping up a state of continued congestion of the liver. Pulmonary emphysema and chronic bronchitis, which are sometimes found accompanying cirrhosis, without disease of the heart, may be supposed to act in its production in the same manner, by obstructing the venous circulation.

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* See Brit. and For. Med. Rev., vol. viii, p. 554.

Cirrhosis is very rarely found in connection with tubercular disease of the lungs. The fatty degeneration of the liver, on the contrary, is a frequent complication of consumption.

The morbid alteration of the *kidney*, known by the name of Bright's disease, frequently accompanies cirrhosis, having been met with fifteen times in forty-two cases. Some differences were observed between these cases of considerable interest; thus in nine cases where cirrhosis and renal disease existed together and appeared to be of about the same standing, old organic lesions of the heart and lungs were also found, which our author considers to have been the exciting causes of the diseases of both the liver and kidneys, repeated congestion of both these organs having been occasioned by obstruction to the circulation. In another series of cases, which includes three out of fifteen, the cirrhosis seemed to be of a much older date than the affection of the kidneys, and probably gave rise to it by obstructing the circulation of the abdominal veins. In the remaining three cases the disease of the liver and kidneys seemed to be of about the same date and had been probably developed from a similar cause, the nature of which, however, was unknown.

2. In the second class may be arranged the following:—*Ascites*, which constantly accompanies cirrhosis in the more advanced stages; *Peritonitis*, producing purulent effusion and the formation of false membranes; *Pleuritis* and *hydrothorax; Pericarditis*—this has only been met with in a few cases; *Anasarca*—this generally occurs in complicated cases along with ascites and when the disease of the liver is in an advanced stage. Besides these, *œdema of the lungs, pneumonia*, and *pulmonary apoplexy* have been met with, as well as congestion of the mucous membrane of the alimentary canal; and *intestinal hemorrhage*, which must be considered as an effect of the disease of the liver arising from the obstruction of the circulation of the blood through the vena porta.

Cirrhosis is more frequently met with in men than in women; thus of eighteen cases of the simple or uncomplicated form of this disease, twelve occurred in males and six in females. Of the whole number of forty-five cases examined by M. Becquerel, twenty-eight were found in men and seventeen in women.

With regard to the influence exerted by age, the eighteen simple cases may be thus arranged:

Between	18	and	20	years	1
"	20	"	30	"	2
"	30	"	40	"	7
"	40	"	50	"	3
"	50	"	60	"	5

Thus persons between thirty and forty seem to be most liable to be attacked by cirrhosis. This disease is also met with in children; and M. Becquerel is disposed to think that it occurs more frequently in young subjects than has generally been supposed.

With regard to the symptoms produced by cirrhosis, none exist sufficiently characteristic to enable the physician to diagnosticate its presence during life. The most constant symptom of this disease in its more advanced stage is dropsy, which always commences in simple cases in the abdomen; its approach is generally unaccompanied by pain, but in a few cases the belly is the seat of pain, either with or without pressure, and the presence of peritonitis is thus indicated. Anasarca sometimes precedes the ascites, but Bright's disease of the kidney or disease of the heart are then always indicated. M. Becquerel says that the state of the urine is always peculiar in this disease; it is of a deep orange and often reddish-yellow colour, very dense, strongly acid, and deposits an unnaturally large precipitate of urate of ammonia, which is of a bright red or cinnabar colour. The causes of this state of the urine are unknown.

The course of this affection is uniform and continued, and it always proceeds more or less quickly to a fatal termination, being apparently uninfluenced by any plan of treatment. *Brit. and For. Med. Rev.*, October, 1840, from *Archives Gén.*, April and May, 1840.

13. *Tubercle in the Cerebellum.*—Diseases of the central organs of the nervous system are involved in so much obscurity, that the following case, communicated to the Liverpool Medical Institution, by Mr. LONG, will be read with interest.

Whilst attending a lady in February, 1840, Mr. L. was requested to see a servant who was suffering from sick headache; she had nausea, and occasional slight vomiting; her bowels were constipated, and tongue slightly furred; a disagreeable bitter taste in the mouth; pain in the occipital region extending to the vertex, and a perfectly quiet pulse.

"I ordered an aperient, which evacuated the bowels freely, and then directed small doses of blue pill to be taken at bed-time, and a mild aperient each morning. In a few days the tongue became perfectly clean and moist; the disagreeable taste had disappeared; but the vomiting and headache persisted, having still the characters of that form of headache usually denominated sick headache.

"I ordered her to bed, with the intention of examining her more carefully. I found the abdomen quite soft, without the slightest degree of tenderness in the epigastric region, or elsewhere. I then inquired into the state of the uterine system: her age was forty; the catamenia were regular as to time, and healthy in quantity and quality. She informed me that for upwards of a dozen years she had, at intervals, suffered from attacks similar to that which she now experienced, and that at times the pain in her head was so severe as to confine her to bed; that these attacks frequently came on at the menstrual period, but, if they occurred prior to it, were always aggravated by it; that at first they were easily removed by a brisk aperient, but had progressively become more obstinate; and that the attack under which she was then labouring had existed a fortnight before I saw her.

"She described the headaches as commencing usually during the night, or towards morning, and when very severe being always attended with vomiting, which occurred most frequently after eating, but frequently without any assignable cause; in fact, it was the obstinacy of the vomiting which drew my attention more particularly to the case; for medicines and treatment directed by this particular symptom were of no use whatever.

"Taking into account the healthiness of the uterine functions, the quietness of the pulse, the natural state of the tongue, the freedom from pain or tenderness in the epigastric region, and the persistence of the vomiting and periodical headache, I felt little doubt but that these phenomena owed their origin to the cerebro-spinal system; in effect, on making pressure between the occiput and atlas she experienced an acute pain extending from this region to the vertex, and immediately vomited.

"I directed leeches to be applied below the occiput; they produced marked relief. I repeated them, and the headache and vomiting ceased; she slept soundly during the night, which she had not done for weeks before, and was able to go about the house as usual. At this period I did not remark any peculiarity in her gait, except that she moved about cautiously, as if afraid of shaking her head.

"In a few days the symptoms began to return. I directed a blister to be applied to the same region. This checked them at once; she improved, was able to go out, and stated that although she did not feel quite well, yet that she was in her usual state of health. In this state she continued, and at my urgent solicitation applied a second blister, but could not be prevailed upon (being relieved from her distressing symptoms) to persist in the treatment I had laid down for her.

"Towards the end of March she went into the country, and consulted a practitioner there, who was of opinion that all her ailments resulted from a "change of life," and that the leeches and blisters had been injurious. He recommended some medicines, which she took; the effect, however, not bearing out the opinion she had received, but her headache and vomiting recurring, she returned to Liverpool, and I was requested to see her in consultation with a physician of this town. I found her much worse. The headache and vomiting were as bad as at first, with occasional hiccup, and now and then slight difficulty of deglutition. In attempting to walk she staggered like a drunken person, and supported herself by holding a chair, or placing one hand against the wall. In sitting down she was some time before she could steady herself. At times partial convulsive movements occurred. These were peculiar; the muscles at the back of the neck first became rigid, the head being drawn backwards, and then twisted to the right side, and then convulsive movements of the muscles of the face on the same side commenced. These convulsive movements were sometimes accompanied by a tremor of the whole body. The menstrual secretion was still regular and healthy; the tongue quite clean, but tremulous; the bowels easily moved by medicine; the pulse slow, but otherwise natural; the temperature of the body below the natural standard.

"The plan of treatment adopted included slight irritation of the nape of the neck by means of lunar caustic, and she continued under our care until the middle of May, the convulsive twitchings increasing in severity, the headache, unsteadiness in walking, and vomiting persisting. It is worthy of remark that the convulsive twitchings and accompanying phenomena had for the last week or two assumed an intermittent character, so that she had what she called a good day and a bad day; the good day was only so, however, when compared with her bad day. This always commenced with headache during the night, then vomiting, then convulsive twitchings of the neck and right side of the face, and then a tremor of the whole body. During her bad day she was confined to bed; during her good day she sat up or walked about in the unsteady manner I have described. She was once seen by one of the family, when attempting to walk in the garden, to roll completely over. Her sister also informed me, and was corroborated in her statement by her fellow-servants, that she had frequently a tendency to fall forwards, and would have done so had not she or they caught her.

"She went to reside with her sister in town from this period until the evening of the 28th May (about a week.) I heard nothing of her. On the evening in question I was sent for, and found her seated in a chair, dead. She appeared to be asleep, so that I had some difficulty in persuading her friends that she was actually dead. Her sister informed me that during the preceding week she had been rather worse than usual; that the convulsive twitchings had extended to both arms, both being equally affected; that, on the morning of the day on which she died, she felt better than usual, but expressed a strong conviction that she should not recover. In the evening her headache commenced, the convulsive twitchings succeeded, she complained of sickness, a basin was held before her, she opened her mouth as if to vomit, and expired. She had passed her usual catamenial period eight days.

"I examined the body eighteen hours after death, and was assisted by Mr. Ellison. There were no external signs of scrofula. Nothing unusual was found in the membranes of the brain, or in its substance. A considerable quantity of colourless fluid escaped from the lateral ventricles; the arachnoid investment of both choroid plexuses was considerably distended by fluid underneath, presenting a hydatid-like appearance. The pia mater investing the cerebellum was much more minutely injected than could be accounted for by the effects of mere gravitation, particularly as the pia mater investing the posterior lobes of the brain was not similarly injected. The external configuration of the cerebellum was natural. Its whole substance and surface were rather softer than usual. The inferior vermiform process was occupied by a tubercle the size of a common marble, of a somewhat irregular figure, extending about a quarter of an inch into the right lobe. The nervous tissue immediately surrounding it was softer than the rest of the cerebellum. The superior surface of the right restiform body, just where it plunges into the cerebellum, was much softer than the left. The medulla oblongata, the pons varolii, and the nerves, arising from them were perfectly healthy. We were not permitted to examine into the state of the spinal cord, or any other part of the body. The tubercle was hard, and when cut into presented granules of concrete pus, and appeared to me to be contained in a fine cyst.

"*Summary of the Symptoms.*—Senses unaffected; intellectual faculties entire, except that the memory seemed at times impaired; catamenia regular, and no derangement of sexual functions; periodical headache extending from the occiput to the vertex, of twelve years standing.

"Pain on pressing the occipital region; vomiting without epigastric tenderness; clean but tremulous tongue; occasionally slight difficulty of deglutition; rigidity of the muscles of the neck, with convulsive twitchings drawing the head to the right side; twitchings of the muscles of the right side of the face, extending subsequently to both arms; want of command over the lower limbs, with tendency to fall forwards.

"Lesions found after death; tubercle in the inferior vermiform process of the cerebellum, extending into the right lobe; softening of the cerebellum, particularly around the tubercle; injection of the pia mater investing the cerebellum; softening of the right restiform body; fluid in the lateral ventricles of the brain.

"1. The points worthy of notice are the rarity of tubercles of the cerebellum. Thus Louis and W. Lombard found tubercles in this organ twice only in 450 tubercular adults.

"2. The length of time these productions may exist without giving rise to serious symptoms: a case is mentioned by Dr. Abercrombie in which a tubercle of the cerebellum evidently dated its commencement at least five years prior to death.

"3. The intermittent phenomena caused or induced by a permanent change of structure, or new production, depending probably upon the intermittence of the lesions which exist around it; and, consequently, the existence of a new production may give rise to no phenomena, so long as the surrounding tissues are unaffected by it, and remain in a state of integrity.

"4. The non-appearance of the menstrual discharge at its usual period—eight days prior to death; the aggravation and extension of the symptoms during this period; the existence of a considerable quantity of serum in the lateral ventricles: though a question may arise whether death was caused by the vessels relieving themselves by this effusion, or whether it was produced by syncope.

"5. The softening of the right restiform body, and the remark of Rolando, "That injury of one of the restiform bodies produced convulsions, with curving of the body of the animal to the injured side;" there being in this particular a coincidence.

"6. The want of accordance between the case I have related and the case related by Mr. Serres, which induced him to place the seat of sexual impulse in the middle portion of the cerebellum (on this point I was particularly anxious, and purposely delayed its consideration for this place.) Eighteen years ago she had a son, who is now alive; since that period she has had no intimate male acquaintance, although she has not shunned their society; and during the whole of my attendance I did not perceive the least symptom of any amorous propensity, and her sister assured me that since her mishap she is certain she had none.

"I may mention here that Mr. Montault has related a case of a tubercle an inch in size occupying the whole vertical thickness of the middle portion of the cerebellum. The individual was paraplegic, and addicted to women; but in this case there existed other disease of the brain, and the lumbar vertebræ were diseased; whereas M. Guerard mentions a case where a tubercle an inch and a half in size existed at the upper surface of the cerebellum, and in the middle line; the substance of the cerebellum around the tubercle to the extent of two lines was softened; the spinal cord was sound. This individual was weak, particularly in his lower limbs, and staggered in walking. It is added it would be impossible to say that there was any marked symptom referring to the genital organs. The case rather seems to favour the opinion of M. Magendie, who, it is stated in the Journal Hebdomadaire, ascertained, by direct experiment, that when an injury was inflicted upon the middle portion of the cerebellum the animal remained undecided in its movements; or considering the cerebellum as a whole, without reference to its middle portion, it seems to favour the opinion of M. Flourens and M. Bouillaud, that in it resides the faculty of combination of the movements; and coincides with the cases related by Lallemand, Gall, and Guerard, the individual staggering in walking, and having a tendency to fall forwards.

"7. The accordance of the symptoms in the case I have related with the cases of disease of the cerebellum related by Andral, these being thirty-six cases of disease of various kinds, and of variable extent, and eleven cases of abscess.

"Thus we find the intellectual faculties affected in 5; the senses in 6; the motor powers in 30; the tongue, in the thirty-six cases, 2; headache in 35; vomiting in 17.

"With respect to derangements of the motor powers they are stated to have been various; but amongst them we find several in which paralysis affected especially the lower limbs; whilst it is noted, however, the involuntary contractions of a greater or less number of muscles is a more common phenomenon than paralysis: in a great number all the body was agitated by convulsive movements, at intervals, in other particular muscles, as those of the neck, drawing the head backwards, or to one side. He also mentions the facts stated above, that some individuals had a sort of uncertain gait, staggering like a drunken person, and having a tendency to fall forwards.

"I may here mention two cases, one by Andral. Convulsive movements occurred, and always commenced by a powerful agitation of the head, which was drawn backwards as in a variety of tetanus. Some days the convulsions were confined there; but at other times became more general, and almost all the muscles of the body were affected: they augmented in frequency and intensity, extended to the respiratory muscles, and the patient died in a sort of asphyxia. An encysted abscess, the size of a pullet's egg, existed in the left lobe of the cerebellum. The second by M. Recamier. Frequent convulsive movements existed, commencing always in the muscles of the neck. In these attacks all the body was agitated, and the head drawn backwards. An encysted abscess, the size of a pullet's egg, existed in the left lobe of the cerebellum.

"With respect to the headache, it is remarked by Andral that it was generally seated in the occipital region; was mostly intense, and in several cases assumed a periodical or intermittent character; and that when vomiting occurred it was in all sympathetic, and one of the predominant symptoms, not occurring as a simple complication, but being certainly connected with the disease of the cerebellum.

"Dr. Abercrombie remarks, that where periodical headaches and paroxysms of vomiting occur in indurations of the nervous centres, the prominent morbid appearances are found in the cerebellum, and that the uneasiness in the head is more permanent and fixed than we should expect to find in a dyspeptic case, and the uneasiness is increased by causes which would probably be beneficial in dyspeptic headache; such as activity and cheerful company.

"He also notices that in cases of paraplegia tumours and indurations often exist in the cerebellum or tuber annulare; but that the cases on this point are unsatisfactory, in consequence of attention not having been paid to the spinal cord."—*Lond. Med. Gaz.* December, 1840.

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14. *A Peculiar Form of Infantile Convulsions.* Mr. J. W. West, of Tunbridge, describes in a recent number of the *Lancet*, a very rare and singular form of convulsion peculiar to young children. The only case Mr. W. has seen of it, occurred in his own child, a boy nearly a year old, who was, when born, a remarkably firm and healthy infant, and continued to thrive until he was four months old. "It was at this time," Mr. W. says, "that I first observed slight *bobbings* of the head forward, which I then regarded as a trick, but were, in fact, the first indications of disease; for these *bobbings* increased in frequency, and at length became so frequent and powerful as to cause a complete heaving of the head forward towards his knees, and then immediately relaxing into the upright position, something similar to the attacks of emprosthotonos; these bowings and relaxings would be repeated alternately at intervals of a few seconds, and repeated from ten to twenty or more times at each attack, which attack would not continue more than two or three minutes; he sometimes has

two, three, or more attacks in the day; they come on whether sitting or lying; just before they come on he is all alive and in motion, making a strange noise, and then all of a sudden down goes his head and upwards his knees; he then appears frightened and screams out; at one time he lost flesh, looked pale and exhausted, but latterly he has regained his good looks, and, independent of this affection, is a fine grown child, but he neither possesses the intellectual vivacity or the power of moving his limbs of a child of his age; he never cries at the time of the attacks, or smiles, or takes any notice, but looks placid and pitiful, yet his hearing and vision are good; he has no power of holding himself upright or using his limbs, and his head falls without support.

"Although I have had an extensive practice among women and children, and a large circle of medical friends, I have never heard or witnessed a similar complaint before. The view I took of it was that, most probably, it depended on some irritation of the nervous system from teething; and, as the child was strong and vigorous, I commenced an active treatment of leeches and cold applications to the head, repeated calomel purgatives, and the usual antiphlogistic treatment; the gums were lanced, and the child frequently put into warm baths. Notwithstanding a steady perseverance in this plan for three or four weeks, he got worse, the attacks being more numerous, to the amount of fifty or sixty in the course of a day. I then had recourse to sedatives, syrup of poppies, conium, and opium, without any relief; at seven months old he cut four teeth nearly altogether without any abatement of the symptoms, and, up to this period, he was supported solely at the breast; but now, at the eighth month I had him weaned, as he had lost flesh and appeared worse; I then only gave him alteratives, and occasionally castor oil. Finding no benefit from all that had been done, I took the child to London, and had a consultation with Sir Charles Clarke and Dr. Locock, both of whom recognized the complaint; the former, in all his extensive practice, had only seen four cases, and, from the peculiar bowing of the head, called it the "salaam convulsion;" the latter gentleman had only seen two cases; one was the child of a widow lady, it came on while she was in Italy, and, in her anxiety, she consulted the most eminent professional gentlemen of Naples, Rome, Florence, Genoa, and Paris, one of whom alone seemed to recognize the complaint. In another case, mercury, corrosive sublimate, opium, zinc, and the preparations of iron, were tried without the slightest advantage; and, about six months from the commencement of the symptoms, a new one was added; there began a loss of motion in the whole of the right side, and the child could scarcely use either arm, hand, or leg. Sir Astley Cooper saw the child in this state: he had never seen or heard of such a case, and gave it as his opinion, that "it either arose from disease of the brain, and the child will not recover, or it proceeds merely from teething, and, when the child cuts all its teeth, may probably get well:" some time after, this child was suddenly seized with acute fever; the head became hot, and there were two remaining teeth pressing on the gums; the child was treated accordingly; leeches to the head, purged, and lowered; the gums were freely lanced; in a few days the teeth came through, and the child recovered, and from that time the convulsive movements never returned. Sir C. Clarke knows the result of only two of his cases; one perfectly recovered; the other became paralytic and idiotic; lived several years in that state, and died at the age of 17 years. I have heard of two other cases, which lived, one to the age of 17, the other 19 years, idiotic, and then died. I wrote to Drs. Evanson and Maunsell, of Dublin; the former gentleman being in Italy, the latter very kindly replied, he had seen convulsive motions in one finger, arm or leg, but had never witnessed it to the extent of my poor child. As there has been no opportunity of a post-mortem examination, the pathology of this singular disease is totally unknown."—*Lancet*, February 13, 1841.

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15. *Treatment of Variola by the ectrotic method.*—By J. F. OLLIFFE, M. D. In this paper read before the Parisian Medical Society, we have some statements worthy of particular notice.

Cotugno is said to have been the first to direct attention to the means of preventing the disfiguration of the face, and for that purpose he recommended that this part should be frequently bathed with tepid milk and water, under the idea that the continual moisture would be efficacious in opposing the complete development of the pustules. The work of Cotugno was published in 1771.

In 1825, M. M. Bretonneau and Serres in an article published in the *Archives Générales*, advocated the employment of cauterization in variola, and gave the name of "*méthode ectrotique*" to it. M. Velpeau united with them in this treatment, but though each of these eminent practitioners united in the *principle* of the treatment, they differed in their mode of operating.

M. Bretonneau pierced the summit of each pustule with a gold or silver needle, charged with a small portion of lunar caustic in powder; he cauterized on the second, or at latest on the *third* day of the eruption, with the double intention of procuring the abortion of the pustules, and preventing the formation of scars; M. Guersent, physician of the Hôpital des Enfans Malades, repeated M. Bretonneau's experiments.

To M. Serres belongs the credit of creating the *méthode ectrotique*, properly so called. The word ectrotique is derived from the Greek εκτρωσις or εκτρωτικος, which means "procuring abortion." M. Serres proceeded, in confluent smallpox, by what he called "cautérisation en masse." He passed over the eruption a pencil dipped in a solution of nitrate of silver, the proportion from fifteen to forty-five grains per ounce of distilled water; in the distinct or discrete variety, he was not accustomed to open the insulated pustules, whilst M. Bretonneau invariably did so, but he touched each externally with the caustic. M. Serres affirmed that this topical application, besides causing the abortion of the pustules, opposed the occurrence of phrenitis, otitis, and ophthalmia, which so often appear in the course of the disease which now occupies our attention.

M. Velpeau completely removed the apex of the pustule with the point of a lancet, and then introduced into its cavity the sharpened end of a pencil of nitrate of silver.

The inventors of this method have summed up their ideas in the following conclusions:—

If the cauterization be performed on the second day of the eruption, or, at *latest*, on the *third*, no pustules are formed; if on the fourth day, the result is uncertain; if it be delayed until the fifth or sixth day, the progress of the eruption is not modified, and cicatrices remain.

In 1839 M. Legrand read to the Academy of Medicine a memoir* on the employment of gold leaf in smallpox. This practitioner applies to the face of the patient a coating of a solution of gum arabic, over which he lays the metallic leaf, thus gilding the visage.

In 1835 M. Gariel, interne at the Salpetrière, published in the *Archives Générales* some very interesting experiments made by M. Briquet, on the treatment of variola by mercury. The memoir alluded to, contains reports of eight cases of variola, six semi-confluent and two confluent, all treated and cured by mercury. The first patient was a young man, aged 25 years. He entered the hospital with an abundant eruption. The plaster of *Vigo cum mercurio*† was applied to the left arm, and on the right was placed a common diachylon plaster. Under the mercurial plaster *no pustules appeared;* whilst on the right arm the progress of the eruption was unmodified. No mercurial topic was applied to the

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* Archives Générales, Aug. 1839.

† The following is the formula for the plaster of Vigo according to the French pharmacopœia.

Mercure - - - - - - -	95 parties.
Styrax liquide - - - - - -	48
Emplâtre simple - - - - - -	312
Cire, resine, terebinthine, āā - - -	16
Gum ammoniac, bdellium, encens et myrrh, āā	5
Safran - - - - - - - -	3
Esprit de lavande - - - - - -	2

face of this patient, as M. Serres dreaded the occurrence of cerebral symptoms; *deep cicatrices* remained after the recovery of the patient.

The second case occurred in February, 1835. I mention this date with precision, as the patient, named Bouret, ætat. 15, was the first who was treated by the general topical system. His face was covered with the plaster; a part of which he tore off during the night which followed its application. *The denuded surface was the seat of suppurating pustules, whilst on that portion of the visage which continued subjacent to the plaster their abortion was effected!*

The last case narrated by M. Gariel, is that of a man named Odiard. He had not been vaccinated. He was affected with violent confluent variola; the pimples were small, scarcely raised above the level of the epidermis, and surrounded with a brilliant red areola. The Vigo plaster was applied, and allowed to remain seven days; on its removal, it was found that no suppuration had been established, with the exception of four pustules, and these were situated near the mouth, and had not been in contact with the plaster. This patient was radically and rapidly cured, and no scars were manifested. I must not omit to state, that the comparative effects of other topical remedies were tested, but in no case did they in any way modify the eruption.

From the foregoing results, M. Gariel drew the following inferences:—

1. The plaster of Vigo cum mercurio and powdered litharge united with lard, produces a complete abortion of variolous pustules.

2. Diachylon, porphyrised charcoal, gum arabic in solution, and all other topics hitherto applied (with the exception of litharge), with the intention of causing this abortion, have completely failed.

3. The abortion takes place, not only when the pustules are yet in a state of papulæ, but even when they are in full suppuration.

4. The abortion takes place by a process totally different from that which is effected in *varioloid* affections. In the latter it is to be attributed to the prompt desiccation of the *vesicle*, whilst in variola the pimple does not open at all; no pus appears, no scales are formed; resorption is effected, and, consequently, no scars can possibly occur.

5. That this resorption occasions none of the accidents which they were theoretically supposed to do, previous to the researches of M. Serres, but that, on the contrary, the abortion of the pustules renders this disease less severe, since it diminishes the number of pustules, in which, in fact, consists the severity of the disease.

In 1837, M. Gariel defended an inaugural thesis on the subject before us, at the Parisian Faculty of Medicine; but little attention was paid to his remarks or to those of M. Serres. Even M. Rayer, in his last edition of the "Maladies de la Peau," alludes to mercurials in variola in a very cursory manner, and professes his ignorance of their mode of action. Things were in this state, when, in October, 1837, a violent smallpox epidemic broke out in Paris and elsewhere. M. Briquet, of the Hôpital Cochin, was thus afforded an opportunity of giving mercury a fair trial. The result of these trials was given in the *Archives Générales* for Sept. and Oct. 1838.

The following is the plan of treatment now under consideration, as given by M. Olliffe.

"Mercury, as a topic, ought to be employed in all the varieties of smallpox, whether simple, confluent, or modified. Its effect is either to prevent the development of the pustules, or so to modify them that they become mere abortions. The whole face should be covered with a mask of the Vigo plaster, merely leaving a space for the mouth, nostrils, and eyes. A little mercurial ointment is applied to the eyelids. By the application of these plasters, the exanthem either undergeos entire resolution, or is converted into *vesicles*, or tubercles. The resolution is either primitive or secondary. The former takes place when the eruption is still papular; so that the papulæ, which, without the application, would have passed into pustules, disappear completely under its influence. The plaster often, indeed generally, changes the nature of the eruption, by converting it into a vesicular or tubercular form. When it assumes the vesicular form, it differs little in appearance from herpes;—the vesicles contain a lymph-like serosity, and are surrounded by a light red areola; and a most remarkable circumstance is, that the skin between the insulated vesicles is pale, and never swollen and red, as it is in smallpox. No *suppuration ever takes place.* A day or two after the removal of the plaster the vesicles dry up, without any desquammation; and as for cicatrices, M. Briquet has never seen any form after his treatment. He totally differs from M. Serres respecting the utility of the plaster when the eruption has become pustular. The plaster is allowed to remain for three days in simple smallpox, and for four in confluent. M. Briquet tried, as did M. Serres, the effect of pressure, of lead plasters, and a host of other topical remedies; but always without the effect of modifying, in any way, the eruption. Thirty observations, some of them relative to cases of the most grievous kind, attest the unparalleled success of M. Briquet's experiments.

"Friction, with mercurial ointment, may be substituted for the Vigo plaster; and they are, in fact, quite as efficacious; but they must, as in all other cases, be performed before the eruption assumes the pustular form."—*Lancet*, Feb. 6, 1841.*

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16. *Smallpox—Vaccination—Re-vaccination.*—These subjects are of such great interest, and are exciting so much attention, that we transfer to our pages from the *Lancet*, the following notice of a paper by George Gregory, Esq., entitled "Observations on Vaccination and Smallpox, more especially to the theory of vaccine influence, and the relation subsisting between the cicatrix and the character of the consecutive variola;" read before the Royal Med. and Chirurg. Soc., and also extracts from a report of the debate to which the reading of the paper gave rise.

The observations of the author, in the present paper, are intended to point out, first, the alarming increase of smallpox in the metropolis, as shown by the books of the Smallpox Hospital; and, secondly, the insufficiency of the appearance of the cicatrix of the former vaccination, as a test of the degree of protection afforded by the process.

Upon the first point, he adduces the fact that the admissions in the first three quarters of 1840, only amounted to 142, being at the rate of 16 per mensem; while in the 25 days immediately preceding the reading of the paper, they amounted to 93, being at the rate of nearly 4 per diem—a greater number than was ever admitted in one month since the establishment of the hospital in 1746. Of 316 cases admitted in 1840, 194 had not been vaccinated, of whom 87 died, or 45 per cent.! 120 had been vaccinated, of whom only 8 died, being at the rate of 7 per cent.; the remaining two had the smallpox previously. Of the 316 patients, 47 were under 5 years of age, of whom 28 died; 45 between 5 and 15, of whom 9 died; 224 were adults, of whom 58 died. The total mortality was 95, or 30 per cent. on the gross admissions.

With reference to the second point, the author entered at some length into an explanation of the causes by which the many observed varieties in the appearance of the cicatrix may be explained, and presented the society with two series of well marked cases; in the first of which, severe smallpox occurred in cases presenting perfectly normal cicatrices; whilst, in the second, the opposite anomaly presented itself; the lightest and truly varicelloid eruptions co-existing with small and very imperfect cicatrices.

In the conclusion of his paper the author expresses a doubt of the conclusion seemingly derived from the late experiments of Mr. Ceeley, of Aylesbury, of the identity of the vaccine and variolous poisons.

Dr. Webster thought that the conclusion come to by the author, in the first paragraph of his valuable paper, respecting the unusual prevalence and mortality of smallpox, at the present moment, in the metropolis, was somewhat erroneous. And, as every observation from Dr. Gregory, on a disease with which he was so familiar and experienced, carried great weight with it, especially when considerable alarm existed in the public mind on the subject, Dr.

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* The memoir of M. O., at least as published in the *Lancet*, contains a number of errors which are here corrected.—Editor.

W. begged to offer a few remarks, in opposition to the deductions the author had drawn from recent occurrences at the Smallpox Hospital. For, although a greater number of patients had been admitted, and more deaths had taken place at that institution, during last year, than at any similar previous period since its foundation, the result has been quite otherwise in the metropolis generally; and in support of this opinion, Dr. W. appealed, with the utmost confidence, to the Registrar-general's Report; a document most useful to the medical profession, and highly creditable to the government. In these tables 3817 fatal cases of smallpox, or 73½ weekly, were recorded to have taken place during 1838, in London, whilst in 1840 only 1233 deaths occurred, being scarcely one-third of the former number. Such an incontrovertible fact, notwithstanding the admissions and deaths at the Smallpox Hospital, must show that the fears now existing were groundless. Statistical conclusions, when drawn from a limited number of facts were often very fallacious; but if obtained from the occurrences in a population of upwards of a million and a half, like that of the metropolis, they were then of great value, and most correct; hence the opinions expressed by the author must be taken in a limited sense, and by no means as proving the general prevalence of smallpox. It was much to be regretted that this disease has so frequently prevailed after vaccination, as stated by the author; but Dr. W. trusted that in many of those cases the patients had been imperfectly vaccinated; and he hoped the fact of so many persons affected by the secondary smallpox, would stimulate those most interested to extend genuine vaccination more and more, since it was the surest preventive we yet possessed against the ravages of this most disgusting and fatal disease.

Dr. Gregory, in answer to the observations of Dr. Webster, might remark, that the present epidemic was now only in its commencement. This epidemic, like that in 1838, began in the autumn; and as it had been proved that epidemic diseases generally required six months to fully develop themselves, and six months more to recede, he calculated that the present one would reach its greatest height in May or June next. This epidemic had commenced in October, 1840, since which period the admissions into the Smallpox Hospital had been gradually and steadily increasing in number. The epidemic of 1838 commenced in October 1837, and did not reach its crisis until the following May; hence it would be seen that Dr. Webster's calculations were altogether fallacious, as they had extended to the whole of the years 1838 and 1840, whereas, to be correct, they should have been limited to the months in which the disease had been epidemic. Regarding the other statement of Dr. Webster on the possibility of statistics drawn from the Smallpox Hospital, being erroneous, when taken in reference to the disease in general, he might merely remark, that in both the old and new Bills of Mortality, the deaths from smallpox bore a remarkable correspondence in number with those occurring in the institution in question. He (Dr. G.) had not as yet made any accurate calculation of the comparative numbers affected by this epidemic and that of 1838; but he thought, from general recollection, that the latter was more severe than the former.

Dr. Webster, in addition to the remarks made by Dr. Gregory on the epidemic smallpox of 1838, would say, that the disease was most prevalent in the months of April, May, and June of that year, when the average weekly deaths were about 88, or 1141 in the quarter; whereas, during the same months of 1840, the average deaths were only 13½ per week, or 174 in the quarter. This contrast was, indeed, truly remarkable. Besides, although Dr. G. reported the admissions and deaths, at the Smallpox Hospital, to have been very great during last December, and up to the present date, nevertheless it appeared by the registrar-general's tables, that the epidemic was becoming less prevalent. In the month of December last, the disease was certainly more fatal than during any other month in the year; but it was only in the last week that the average number of 1838 was actually exceeded, when 102 deaths are reported. However, it ought to be remembered, when the accounts for the year were about being closed, that perhaps some deaths were included in this fifty-second report, which ought to have been entered in previous returns; and such a supposition appeared the more likely, since the deaths from all causes were so high as

1377, instead of approximating to the average number of previous years, or 1013. Again, in the reports of the 9th and 16th of January of the present year, the deaths from smallpox were respectively 86 and 55; thus proving most conclusively, that the epidemic was rapidly diminishing, notwithstanding its great prevalence at the Smallpox Hospital, which Dr. Webster believed was greatly owing to the excellent accommodation afforded to the patients; besides the well known zeal and experience of the physician, Dr. G., under whose charge they were placed, it was, therefore, not surprising, if so many cases were sent to that institution from all quarters.

Mr. Arnot requested information as to which was the most proper period to perform vaccination for its full preservative powers to be obtained. A case was related in the paper, of a child two years and a half old, suffering from confluent smallpox, who had been vaccinated at two months old; and he himself had seen one case of consecutive variola, in a child under seven years of age, who had been vaccinated at the second month.

Dr. Gregory replied, that it appeared to him that the question of the most proper age for vaccination might be drawn into a very small compass, provided the disease were taken properly—that there was a good vesicle and areola, with a due degree of constitutional effect, it mattered not whether vaccination were performed at the second, third, or fourth month, or the second, third, or fourth year. The true question for consideration was, at what period of infantile life vaccination could be performed, so as most certainly to ensure success, and to avoid inconvenience to the parties. This question had recently been forced upon public notice from the interesting circumstance of the Princess Royal being born during an epidemic prevalence of smallpox. In answer to this question it might be stated, that in the first week or ten days after birth, before the infant had attained any degree of plumpness, it was very difficult to vaccinate; not from any want of susceptibility in the patient, but from the difficulty of inserting the lymph properly. This difficulty was more or less present until about the fourth month, and therefore this was the period usually chosen; for not only was the arm then generally plump, but there were also then no contending influences, such as teething, present in the constitution.

Mr. Ceeley agreed, in the main, with Dr. Gregory; but he thought that the difficulty of vaccinating very young children, was mainly dependent upon the mode in which the operation was performed. He believed that an infant of two or three days old might be effectually vaccinated, if the lymph were inserted by merely scratching the skin on its surface; puncturing in these cases would not succeed.

Dr. Gregory remarked, in answer to a question, that there was extreme difficulty in determining at what age patients were vaccinated, who, having afterwards contracted smallpox, were admitted into the hospital. They generally stated that they were vaccinated in early life; but whether at the second, sixth, or twelfth month, they could not tell. Even parents could give no precise information on this point. Thus, in a family of ten children, all of whom had been vaccinated, and one of whom had since contracted smallpox, and died, the only information he could obtain in reference to the operation was, that it was duly performed, in all the cases, by a surgeon at Aylesbury, and that one pound one was paid for each child, "not eighteenpence, Mr. President," said Dr. Gregory, "but one pound one."—(*Hear, hear, and laughter.*) There was another point, however, upon which he would venture to offer more definite information. He had observed a number of cases of smallpox after vaccination, when the process had been gone through at the seventh, eighth, and tenth year, and even at a later period. It appeared to him, that of those who were vaccinated at the adult age, more took the disease than where the vaccination had been performed in early life. Hence he considered the latter period more favourable than the former for the operation; and he explained this by supposing, that in adult life there existed a greater mass of fluids to be improperly impregnated than in the infant state. He would wish to ask a question of the society, and this had reference to the new matter, the variolo-vaccine, as it had been termed, and which had been extensively employed in practice since 1839 —Had the members of the society had any experience of this new material? and if so, had they observed any difference between it and the old vaccine matter? and also, whether they thought it was likely to be more effective in its results than that which had been in use for the last forty years? He himself had recently paid much attention to this subject; and he had observed so marked a difference between the two kinds of matter, that he thought they possessed features which rendered each at once distinguishable. There was a difference in the areola, in the appearance of the vesicle, and in the reparative process. Thus the areola of the variolo-vaccine was of a purple hue; in the centre of the vesicle was a minute green point, described by Dr. Ceeley as the "emerald resting on the pearl;" whereas, in the old vaccine vesicle, Dr. Jenner had described the appearance to be that of the "pearl resting on the rose." The variolo-vaccine was liable to be followed frequently by sharp and deep inflammation of the cellular membrane, and the reparative process was attended by much constitutional disturbance.

Mr. Ceeley believed that there was no specific difference between the two kinds of lymph, although there might be a little variety in the effects of the variolo-vaccine consequent upon the structure into which it was inserted, and the temperament of the individual operated upon. It was curious to observe the various accounts he had received from practitioners of the effects of this lymph. Some said that its effects were milder than were those of the old vaccine matter; others described it as precisely the same, and some remarked that it was more active. These differences in the effects, he believed, were mere varieties, and did not depend upon any specific difference in the matter, but on the circumstances he had already mentioned—the state of the skin, the subject acted upon; and the time of year in which, and of the tissue into which it was inserted. There might be some difference in its activity, in consequence of its being a new lymph. The popular opinion in Aylesbury was, that the new lymph was followed by more secondary inflammation, and more constitutional irritation than was the old; but this peculiarity did not obtain in regard to its primary effects.

The subject of *re-vaccination* being mentioned, Dr. Gregory remarked, that he had not been able to obtain much information, except that it was becoming more prevalent among the lower order than it used to be. In the case alluded to, of a family of ten children, one of whom had died of smallpox after vaccination, eight of the other children had been re-vaccinated under his own eye. In one half of these the disease was attended by perfect vesicles and areola; in others these were mere irritable papulæ; and yet all the children presented perfect cicatrices. This difference in the effects did not appear to be at all traceable to age; some of those in whom the disease took well were old, some were young. He thought we were yet in much want of information to explain some of the phenomena connected with variola. He should, however, recommend re-vaccination in all cases, to give the patient a better chance against the infection of smallpox. With regard to the remarks of Mr. Ceeley, respecting the different accounts he had received of the effects of the variolo-vaccine, he (Dr. G.) might merely observe, that these differences did not obtain when the old matter was employed. He knew by experience what he had to expect from the old matter, and calculated accordingly. Not so, however, with the new, for he found that this would produce a mild vesicle on Thursday, the first; a very severe one on Thursday the eighth, and from this a mild one might subsequently be reproduced. It appeared to him, in this particular, to bear a close resemblance to variola; for a mild varioloid disease sometimes produced a confluent form of the complaint in another person, and *vice versa*, the confluent sometimes generated the mildest varioloid.

The same subjects were also discussed before the *Medical Society of London* and as the debate elicited some interesting facts, we add a report of it.

Mr. Dendy stated that he had found the character of the cicatrix, from the previous vaccination, afforded no evidence of the amount of protection, and, in consequence, that would not determine the character of the consecutive variola. With respect to the old vaccine matter and the variolo-vaccine, some of which he had procured early from Mr. Estlin, he had found the latter to be so little to be depended upon, that he had given up its use entirely. He believed the reason why vaccination was more likely to be effective in early life, than at the adult period, did not depend upon the cause specified by Gregory; namely, that at the latter period there was a larger mass of fluids to impregnate, but rather upon the fact, that the child's constitution was purer, and the vaccine process was less likely to be interfered with by contending influences in the system. He should recommend the performance of re-vaccination every six or seven years.

With respect to the preventive power of vaccination, Mr. Dendy alluded to three cases, which had come under his notice, of secondary smallpox occurring in children who were deeply pitted by the first attack of the disease; while other children, in the same families, who had been protected by vaccination, merely suffered from a varicelloid eruption, which was followed by no secondary fever. Mr. Dendy adverted to the present prevailing epidemic, which was of a most formidable character.

Dr. T. Thomson thought the vesicle produced by the variolo-vaccine was so frequently exactly similar to the one produced by the old matter, that we might depend upon it as as good and efficient a preventive for smallpox as the latter. It might, perhaps, be a little more active, in consequence of having been so recently obtained from the cow. With regard to the proper time for performing vaccination, he believed that in Paris, at the Foundling Hospital, all the children were vaccinated within the month, and the operation was generally successful. With respect to the susceptibility to the influence of secondary vaccination, he inquired if this might not depend a great deal upon changes which had been produced in the system by severe disease, particularly by fever? He had found that persons who had not been subjected to the annoyance of insect bites previously to the occurrence of a fever, had been so subjected afterwards. Dr. Jenner had considered that the efficacy of the vaccine lymph was somewhat modified by being within the atmosphere of the Smallpox Hospital, and that it was not so protective in that locality as in other places.

Mr. Linnecar considered that sufficient time had not yet elapsed since the introduction of the new matter, for us to come to any conclusion with respect to its efficiency. Mr. Leese, a very experienced vaccinator, had stated, some sessions ago, in that society, that he never knew a case of consecutive smallpox in a person in whose arm there were above four cicatrices from the previous vaccination. Had this been noticed by other practitioners? As secondary smallpox occurred to persons deeply pitted from the first attack, he did not think the test referred to was to be depended upon. The recent Vaccination Bill was a dead letter!

Dr. Chowne observed that, in the Smallpox Hospital, so great a dependence was placed upon the number of the cicatrices present, that the character of the consecutive disease was generally prognosticated from that circumstance alone.

Mr. Dendy believed that one vesicle, if it went through its proper stages, and produced a proper degree of constitutional disturbance, was as effective as twenty. It might be a presumption that such constitutional effect had taken place, if several cicatrices were present.

Mr. Proctor observed, that when vaccination was first introduced, it was never usual to attempt to obtain more than a single vesicle. Consecutive smallpox was very rare for a long time after Jenner's plan was introduced. We did not appear to improve in vaccination. If the system were fully under the influence of the vaccine disease, it afforded the best criterion of the patient's safety. A friend of his had lately lost a child from erysipelatous inflammation consequent upon vaccination.

Dr. Alison related a case of consecutive smallpox, occurring in an infant three or four months old, before the crust of the vaccine vesicle had fallen from the arm.—*Lancet*, February 6, 1841.

17. *On Gouty Concretions, with a new Method of Treatment.*—ALEXANDER URE, Esq., in a paper on this subject, read before the Royal Med. and Chirurg. Soc., introduces to the profession a remedy, which he believes likely to prevent the formation of tophous concretions in gouty subjects. The remedy is benzoic acid, administered in doses of a scruple an hour after a meal. "In the course of a couple of hours (as the author has found by frequent experiments made upon himself and others) the urine voided, amounting to five or six ounces, will be found, on adding a small quantity of muriatic acid, to yield a copious precipitate of beautiful rose-pink acicular crystals, which weigh, after being allowed to settle for a day, about fifteen grains." The body thus produced by the agency of vital chemistry is hippuric acid, and is found to have taken the place of uric acid in the urine, none of the latter being discoverable.

By thus substituting hippurate of soda, a salt of easy solubility, for the very sparingly soluble urate of that alkali, the author conceives that the formation of the tophous concretions may be altogether prevented.

Mr. Ure stated that he had employed the plan recommended in his paper in two or three cases with decided success. He had not found the dose, twenty grains, to be at all too large, and had frequently taken it himself without any unpleasant effects.—*Lancet*, February 6, 1841.

18. *On a Sedative Lotion in Headaches, Congestions, and Cerebral Fevers.*—PROFESSOR RASPAIL, in a letter to the editor of *l'Expérience*, (July 24, 1840,) gives the mode of preparing a lotion, the sedative effect of which, he says, is almost instantaneous. It is as follows: liquor of ammonia, (Qy. the strength?) 100 parts; distilled water, 900 parts; purified marine salt, 20 parts; camphor, 2 parts; essence of rose or some other scent, in the necessary proportion. The whole dissolved cold.

A piece of linen is to be steeped in this solution and applied over the part of the head that the patient points out as the seat of pain, taking care, if it is on the forehead, to apply a thick bandage over the eyebrows, to prevent any drops of the fluid passing into the eyes.

M. Raspail says he has seen headaches intolerably violent, accompanied by photophobia, and retraction of the globes of the eye, disappear completely, from a quarter to half an hour after the application of one wetted cloth. The linen is to be soaked as often as a new access of pain is threatened, and left on the head until it is necessary to soak it anew. In the numerous trials the author has made with this solution, first on himself and afterwards on others, he has been struck by two circumstances of interest in connection with organic chemistry, and symptomatology. When in a violent attack of cerebral fever, we apply on the principal seat of inflammation a concentrated solution of marine salt, an evident odour of chlorine is disengaged, the diseased reaction being analogous to the decomposing and deoxygenating action of manganese, in the elimination of chlorine from marine salt, by means of sulphuric acid. Is this sign constant in affections of this class? It is for experience to decide. When on the contrary we employ a solution of ammonia, a strongly characterized *hircine* (goatish) odour is manifested. The same odour has been disengaged on the application of hydrochloric acid to the skin. M. Raspail has drawn the attention of the profession to this subject in order that they may employ this formula, and fix their attention on the analyses of the disengaged substances, as they may become characteristic of special affections.—*B. & F. Med. Rev.*, Jan., 1841.

19. *Sulphur ointment in Smallpox.*—Dr. MIDAVAINE recommends in an article in the *Annales de la Societé de Médecine de Gand* frictions with sulphur ointment in the treatment of Variola, with the view of arresting the development of the pustules, and consequently preventing the inflammatory fever which results from the turgescence of the skin or the secondary fever (*fièvre de resorption*), so fatal in the suppurative stage.

"The ointment which I use," says M. M. "has the double advantage of preventing suppuration of the pustules, and the cicatrices which ordinarily result from them. This ointment consists of one drachm and a half to two drachms (the first for varioloid, the latter in cases of confluent smallpox) united with an ounce of lard, with which the whole face and those parts of the body covered with pustules are gently rubbed, three times a-day. The nearer the commencement of the eruption this is done, the greater the chances of success. The small pimples then contract and become completely indurated in place of enlarging, and the gastro-intestinal irritation completely disappears. It is rare, even in confluent variola, for the patients not to promptly recover their appetite and ask for food."

Dr. M. relates sixteen cases in which he has employed this treatment and with the most entire success.—*Journ. de Méd. et de Chi. Pratiques*, Dec. 1840.

20. *Treatment of Epilepsy by Cauterizations with Potash.*—Dr. FIEVEE, de Jumond, has published in the *Gazette des Hôpitaux* some cases of epilepsy cured by severe cauterizations, and he invites the attention of practioners to this measure, which he says he has resorted to successfully a number of times.

It is well known that epilepsy has been cured by the patients falling in the fire and severely burning themselves, and we presume this fact suggested the remedy just noticed, at all events it seems to afford encouragement to try the measure. We shall notice one of Mr. F.'s cases.

M. B. aged 45, strong constitution, has been epileptic for fifteen years. The attacks usually came on two or three times a month, and the patient had ordinarily two in the twelve hours.

Nineteen deep and large cauterizations made with caustic potash on the neck, on each side of the cervical and dorsal vertebræ, in series of four each time and at intervals of six weeks completely cured this long continued and horrible disease. Three years has elapsed without a single attack to interrupt the security of the patient or the satisfaction of the physician.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

21. *Partial Injury of one of the Halves of the Spinal Marrow.* By M. BEGIN.—L., a robust old soldier, ætat. 59, received a wound from a sharp-pointed cutting instrument in the back of the neck. He fell immediately, and being unable to raise himself, was obliged to be carried to an adjacent house. He said he had been knocked down by some heavy weapon, and that he had fallen not in consequence of the wound in the neck, which he thought insignificant, but from the violent stunning which he felt at the instant he was struck. He fell *backwards* and on his right side, and there was a slight bruise on the right elbow, but no other sign of external violence, although he attributed the impossibility of moving his right limbs to the shock and the bruises which he had received in his fall, or more still to the blows which he affirmed had been given him while on the ground.

The wound was united by plaster, and the patient, regarding his injury as a slight matter, refused to be bled. On the next day he was taken to the Val-de-Grace, where M. Begin first saw him, in the evening. He then said that he felt nothing but a little numbness of the right side. His pulse was slightly excited; the wound had healed, and he would not be bled. Cold was applied to the head and neck, and warmth to the feet, and antiphlogistic diet was ordered. He passed the night quietly. Next day, on examining the united wound more closely, it was found to be in a transverse direction, half an inch long, at the level of the fifth cervical vertebra, and nearly an inch from its spinous process. Its angles were nearly equally acute, rendering it probable that it had been made with a double-edged instrument; there was neither ecchymosis, nor swelling, nor heat, nor pain, nor hardness about it; the movements of the head and neck were perfectly free, and unaccompanied by pain, even when carried to a considerable extent. The patient felt a kind of weight in his right arm, and had creeping sensations in the hand; with a little difficulty, however, he could raise the arm, and move the forearm; but the fingers half-flexed could neither